

- a second heat source input connected to a second heat source fluid line, whereby multiple heat source inputs are exchanged with the intake liquid.
2. The apparatus of claim 1, wherein at least one of the first and second heat exchangers further comprises a third heat source input fluidly connected to a steam pump drive motor.
3. The apparatus of claim 1, wherein at least one of the first and second heat exchangers further comprises a third heat source input fluidly connected to a Stirling engine generator powering the liquid vapor distillation apparatus.
4. The apparatus of claim 1, wherein at least one of the first and second heat exchangers further comprises a third heat source input fluidly connected to a Stirling engine generator.
5. The apparatus of claim 1, wherein the liquid vapor distillation apparatus further comprising:
an input for receiving untreated input liquid; and
a sump in communication with the input wherein the sump comprises at least one heating element and wherein input liquid is preheated.
6. The apparatus of claim 5, wherein the liquid vapor distillation apparatus further comprising:
a head chamber for collecting vapor from the evaporative condenser; and
a regenerative blower for compressing the vapor, the regenerative blower in communication with the head chamber.
7. The apparatus of claim 6, wherein the liquid vapor distillation apparatus further comprising a switch selected from the group consisting of a thermostatic switch, a pressure-sensing switch, a thermal transducer and a pressure transducer, for signaling completion of the heating phase and turning off the heating element.
8. A water vapor distillation apparatus comprising:
an input for receiving an untreated input water;
a sump in communication with the input wherein the sump comprising at least one heating element and wherein the input water is preheated;
an evaporative condenser coupled to the sump for transforming the water to a compressed vapor and for transforming the compressed vapor into a product water;
a head chamber for collecting a vapor from the evaporative condenser;
a regenerative blower for compressing the vapor, the regenerative blower in communication with the head chamber;
a first two-channel heat exchanger;
a second two-channel heat exchanger; and
a third two-channel heat exchanger, the first two-channel heat exchanger comprising:
a first heat source input connected to a first heat source fluid line, the first heat source input connecting the first two-channel heat exchanger and the third two-channel heat exchanger; and
a second heat source input connected to a second heat source fluid line, whereby multiple heat source inputs are exchanged with the intake water.
9. The apparatus of claim 8, wherein the water vapor distillation apparatus further comprising a switch selected from the group consisting of a thermostatic switch, a pressure-sensing switch, a thermal transducer and a pressure

transducer, for signaling completion of the heating phase and turning off the heating element.

10. The apparatus of claim 8, wherein at least one of the first and second heat exchangers further comprises a third heat source input fluidly connected to a steam pump drive motor.

11. The apparatus of claim 8, wherein at least one of the first and second heat exchangers further comprises a third heat source input fluidly connected to a Stirling engine generator powering the water vapor distillation apparatus.

12. The apparatus of claim 8, wherein at least one of the first and second heat exchanger further comprises a third heat source input fluidly connected to a Stirling engine generator.

13. A water vapor distillation apparatus comprising:

an input for receiving an untreated input water;

a sump in communication with the input;

an evaporative condenser coupled to the sump for transforming the water to a compressed vapor and for transforming the compressed vapor into a product water;

a regenerative blower for compressing the vapor, the regenerative blower in communication with the head chamber;

a first two-channel heat exchanger;

a second two-channel heat exchanger; and

a third two-channel heat exchanger, the first heat exchanger comprising:

a first heat source input connected to a first heat source fluid line, the first heat source input connecting the first two-channel heat exchanger and the third two-channel heat exchanger; and

a second heat source input connected to a second heat source fluid line, whereby multiple heat source inputs are exchanged with the untreated input water.

14. The apparatus of claim 13, wherein at least one of the first and second the heat exchangers further comprises a third heat source input fluidly connected to a steam pump drive motor.

15. The apparatus of claim 13, wherein at least one of the first and second heat exchangers further comprises a third heat source input fluidly connected to a Stirling engine generator powering the water vapor distillation apparatus.

16. The apparatus of claim 13, wherein at least one of the first and second heat exchangers further comprises a third heat source input fluidly connected to a Stirling engine generator.

17. The apparatus of claim 13, wherein the first heat exchanger is a multi-channel heat exchanger.

18. The apparatus of claim 17, wherein the first heat exchanger is a two-channel heat exchanger.

19. The apparatus of claim 17, wherein the second heat exchanger is a multi-channel heat exchanger.

20. The apparatus of claim 19, wherein the second heat exchanger is a two-channel heat exchanger.

21. The apparatus of claim 13, wherein the first heat source input is a first hot water input and the first heat source fluid line is a first hot water fluid line.

22. The apparatus of claim 21, wherein the second heat source input is a second hot water input and the second heat source fluid line is a second hot water fluid line.